



CATEX CHECKLIST

CHECKLIST OF EXTRAORDINARY CIRCUMSTANCES & SENSITIVE RESOURCES IN SUPPORT OF A CATEGORICAL EXCLUSION (CATEX) DETERMINATION FOR A DENALI COMMISSION PROJECT

Program Partner Name Alaska Energy Authority	Project Name Twin Hills Intertie Project	
Location Twin Hills, Alaska	Project # REG -1349	Subproject # N/A
Identify Categorical Exclusion The proposed project is identified in the Denali Commission list of categorical exclusions provided in 45 CFR Appendix A to Part 900. The appropriate paragraph number(s) is/are B5 (a)		

Project Description (2-3 sentences maximum)

This project proposes to install a new 23,850 LF overhead power transmission line between Togiak and Twin Hills Alaska and replace the electrical distribution system in Twin Hills.

Instructions

The information you provide below will assist the Denali Commission in making its determination as to whether a Categorical Exclusion (CATEX) is appropriate or further environmental analysis is required for the proposed project. Please place a checkmark in the blank next to the numbered items indicating your response on that issue. A checkmark in the "Yes" block does not automatically preclude the development of the proposed project. It simply means further assessment is needed. Should you have any remarks that may indicate the need to prepare an Environmental Analysis (EA) or an Environmental Impact Statement (EIS), attach a brief explanation of the circumstances for further evaluation. Adverse affects to environmentally sensitive resources must be resolved through another environmental process, e.g., coordination or consultation under the Coastal Zone Management Act or National Historic Preservation Act, before being categorically excluded. Attachments are allowed and encouraged.

Extraordinary Circumstances	Determination		Basis for determination: <i>See attached comments</i>
	Yes	No	
1. Public Health, Safety or Environment Will the proposed project have a reasonably likelihood of significant impacts on public health, public safety, or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project will improve the reliability and safety of the Twin Hills power distribution system. As a result, environmental and public health will be better protected.
2. Controversy on Environmental Grounds Will the proposed project have effects on the environment that are likely to be highly controversial or involve unresolved conflicts concerning alternative uses of available resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposed project will have minimal environmental effects. The power lines will be mounted on driven pile foundations and construction will occur when the ground is frozen, limiting impacts. The new facilities will improve system efficiency and reduce the amount of diesel fuel and related emissions required to serve the community.
3. Uncertain, Unique or Unknown Risks Will the proposed project have possible effects on the human environment that are highly uncertain, involve unique or unknown risks, or are scientifically controversial?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project will provide predictable benefits to the human environment by decreasing the risk of general public exposure to hazards related to aging and

			non-code compliant power distribution system. No uncertain, unique, or unknown risks have been identified.
4. Precedent for Future Action Will the proposed action establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposed action will provide a long-term solution to the power needs in Twin Hills. The proposed project takes advantage of excess electrical generation capacity in Togiak and eliminates the need for constructing a future prime power plant in Twin Hills. This project reduces potential future environmental effects.
5. Cumulative Impacts Will the proposed project relate to other actions with individually insignificant but cumulatively significant environmental effects?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposed project is a standalone action. The intertie and new distribution system in Twin Hills may result in additional community economic and population growth over time due to more efficient and reliable power supply. However, this is viewed as a natural progression for the community and is a positive impact for the population.
6. Scope and Size Will the proposed project have a greater size and scope than is normal for the category of action?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Generally, the size and scope of this type of facility is based on the combined effects of anticipated capital improvements and the growth rate of the community's population. As such, the proposed size and scope of this project is normal in relation to other communities of similar size and growth characteristics. The proposed facilities meet the requirements for Categorical Exclusions of Appendix A to Part 900 Section B5.

7. Environmental Conditions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposed project is not considered to have the potential to degrade already existing poor conditions. The proposed project traverses wetlands and is authorized under NWP No. 12, POA-2018-00095, by the USACE.
Will the proposed project have the potential to degrade already existing poor environmental conditions or to initiate a degrading influence, activity or effect in areas not already significantly modified from their natural condition?			
8. Environmental Justice	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposed project will have a positive effect on all community residents. The proposed power facilities will be safer and more efficient and reliable than existing systems providing for more stable energy costs and fewer emissions, benefitting all residents.
Will the proposed project have a disproportionately high and adverse effect on low income or minority populations? Ref: Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations			
9. Indian Sacred Sites	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposed site is not on federal lands so is not subject to EO 13007. Further, the State Historic Preservation Office has issued a finding of no historic properties affected for the proposed project dated 2/27/18.
Will the proposed project limit access to or ceremonial use of Indian sacred sites by Indian religious practitioners or adversely affect the physical integrity of such sacred sites? (EO 13007) <i>"Indian tribe" means an Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to Public Law No. 103-454, 108 Stat. 4791, and "Indian" refers to a member of such an Indian tribe. (EO 13007)</i> Ref: Executive Order 13007, Indian Sacred Sites			
Sensitive Resources	Impact Potential		Basis for determination: See attached comments
	Yes	No	
10. Section 106 Historic Properties	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The State Historic Preservation Office has issued a finding of no historic properties affected for the proposed project dated 2/27/18.
Will the proposed project adversely affect properties in, or eligible for inclusion in, the National Register of Historic Places? Ref: National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.), as amended. (See 36 CFR 800, Protection of Historic Properties).			
11. Endangered Species	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The US Fish and Wildlife Service's IPaC Trust Resource Report was reviewed using the IPaC website mapper. Based on the review, there are no endangered species within the limits of the project.
Will the proposed project adversely affect species listed, or proposed to be listed on the Endangered or Threatened Species List, or the specific critical habitat? Ref: Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), as amended. (See 50 CFR part 402).			
12. Historic or Cultural Resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There are no known archaeological or prehistoric sites at the proposed project location. The State Historic Preservation Office has issued a finding of no historic properties affected for the
Will the proposed action adversely impact the historic and cultural environment of the Nation? Ref: Executive Order 11593, Protection and enhancement of the cultural environment.			

			proposed project.
13. Park, Recreation or Refuge Lands Will the proposed project have significant adverse direct or indirect effects on National or State Park, Recreation or Refuge lands? Ref: Wilderness Act of 1964 (16 U.S.C. 1131 et seq.), as amended.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposed project is not located within or adjacent to any National or State Parks, recreation lands, or refuges.
14. Wilderness Areas Will the proposed project adversely impact a wilderness area? Ref: Wilderness Act of 1964 (16 U.S.C. 1131 et seq.), as amended.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposed project will not adversely impact any wilderness areas.
15. Wild and Scenic Rivers Is the proposed project a "Water Resources Project" that will impact a wild, scenic or recreational river area and create conditions inconsistent with the character of the river? Ref: Wild & Scenic Rivers Act (16 U.S.C. 1271 et seq.), as amended.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	This project is not a water resources project.
16. National Natural Landmarks Will the proposed project impact a National Natural Landmark? Ref: Historic Sites Act of 1935 (16 U.S.C. 461 et seq.), as amended.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Based on a review of the National Park Service National Natural Landmarks Website, the proposed project will not impact a National Natural Landmark.
17. Sole Source Aquifers If the proposed action would not have adverse effects on this resource, it may be considered that there is no Impact Potential. Ref: Safe Drinking Water Act of 1974, (42 U.S.C. 201, 300 et seq., and 21 U.S.C. 349), as amended. (See 40 CFR part 149).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	According to the EPA website there are no sole source aquifers in Alaska.
18. Prime Farmlands Will the proposed project convert significant agricultural lands to non-agricultural uses? Ref: Farmlands Protection Policy Act of 1981 (7 U.S.C. 4201 et seq.), as amended. (See 7 CFR part 658).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposed project will not convert any agricultural lands to non-agricultural uses.
19. Wetlands Will the proposed project adversely affect wetlands or will there be construction in wetlands, except in conformance with a U.S. Corps of Engineers Section 404 Permit? Ref: Executive Order 11990, Protection of Wetlands	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposed project will be in conformance to the U.S. Corps Of Engineers nation Wide Permit No. 12, POA-2018-00095.
20. Floodplains Will the proposed project involve construction in a floodplain or impact floodplain development? Ref: Executive Order 11988, Floodplain Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Based on the national FEMA Flood Map Service Center, the project area is not mapped on the Twin Hills side of the Togiak river. In the community of Togiak, The proposed site is within the 1% annual (100-year) flood plain as shown on the attached FIRMETTE flood map. The 100 year flood elevation is 8.4'. The proposed utility poles are 30+ feet tall putting the

			conductors and power components 20+ feet above the 100-year flood elevation as noted in the Togiak FIS report 02009V000A. Given that the majority of the community is within the 100-year floodplain, elevating structures for flood protection is standard engineering practice in the community.
21. National Monuments Will proposed project impact a National Monument?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	This project is not within proximity of any National Monuments.
22. Ecologically Significant or Critical Areas Will the proposed project impact an ecologically significant or critical area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposed site is not near any known ecologically sensitive or critical areas.
23. Other Known Reasons Is an environmental assessment required for other known reasons?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No.

Additional Comments

The only known extraordinary circumstances are that some of the proposed utility poles are located within an established floodplain. The poles will be founded on driven piles (50 ft embedment) that can withstand any anticipated flood forces. Given that the majority of the Togiak community is located in the floodplain, and the height of the power conducting components are well above the 100-year flood elevation, it is our opinion that the floodplain issue does not exclude the use of a the CATEX process.

Based upon the categorical exclusion identified above, this completed checklist and attachments, I certify to the best of my knowledge, that the information provided above is complete and correct, and that:

A categorical exclusion determination is appropriate for this project:

Yes: ☒


No: ☐

Further environmental analysis is required:

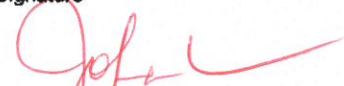
Yes: ☐

No: ☒

PREPARED BY

Date 5/21/2018	Typed or Printed Name and Title Nicholas Phelps, EIT	Signature 
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DENALI COMMISSION APPROVING OFFICIAL

Date 6/12/2018	Typed or Printed Name and Title John Whittington, General Counsel	Signature 
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Environmental Information and Documentation
Supplemental Instructions

Basis for Determination and Documentation

The basis for determination and documentation information must be traceable and establish the factual data to support

the response to each question. Types of information to be included in this column are outlined below.

1. **PRINTED MATERIALS** These are useful sources of detailed information materials such as comprehensive land use plans, zoning maps, city master plans, environmental baseline surveys, environmental assessments, environmental impact statements and studies. Information must be current and must represent accepted methodologies, i.e., not so old that changing conditions make them irrelevant. Citations for the material should include enough information so that an outside reviewer can locate the specific reference, e.g., author, document title, publication date, and page number.

Examples include the Record of Decision, Finding of Suitability to Transfer, Finding of Suitability to Lease, General Services Administration (GSA) Property Suitability Determination Form, Federal Property Information Checklist, Environmental Baseline Surveys, Preliminary Assessment Reports, Environmental Assessments, draft or final Environmental Impact Statements, and City/County master plan or zoning map.

Possible sources of the above documents include as appropriate, GSA, Department of Housing and Urban Development, the property owner, military base environmental office, local governmental organizations, local public library, and City/County planning office.

2. **PERSONAL CONTACT** Personal contacts are useful when the individual contacted is an accepted authority on the subject(s), and the interview is documented. Supporting documentation should include the name, organization, and title of the person contacted and the date of the conversation. Examples include EPA officials, EPA hotlines, officials from state or local planning offices and environmental offices, or an environmental officer of an agency.
3. **SITE VISIT** A site visit does not usually involve any testing or measurements. A site visit is an important method for initial screening of the issues, but for some of the categories it may be inadequate for final evaluation. Supporting documentation should include date of the site visit, by whom, and the supporting observation.

Pollution Prevention. The agency must include pollution prevention considerations in the siting, design, construction, renovation, and operation of the project or facility.

The questionnaire items on sedimentation and erosion control measures and storm water control plan are also pollution prevention related.

ATTACHMENTS
U.S FISH AND WILD LIFE
SERVICE



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Anchorage Fish And Wildlife Field Office
4700 Blm Road
Anchorage, AK 99507
Phone: (907) 271-2888 Fax: (907) 271-2786



In Reply Refer To:

March 07, 2018

Consultation Code: 07CAAN00-2018-SLI-0121

Event Code: 07CAAN00-2018-E-00397

Project Name: Twin Hills Rural Power System Upgrade

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and some candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Please note that candidate species are not included on this list. We encourage you to visit the following website to learn more about candidate species in your area: http://www.fws.gov/alaska/fisheries/fieldoffice/anchorage/endangered/candidate_conservation.htm

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Anchorage Fish And Wildlife Field Office

4700 Blm Road

Anchorage, AK 99507

(907) 271-2888

Project Summary

Consultation Code: 07CAAN00-2018-SLI-0121

Event Code: 07CAAN00-2018-E-00397

Project Name: Twin Hills Rural Power System Upgrade

Project Type: TRANSMISSION LINE

Project Description: This project proposes to install a new power transmission intertie line between Togiak and Twin Hills. Construction of the intertie is to occur during the winter months (2018/2019). All power poles for the intertie will consist of driven piles. Minimal clearing is expected.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/59.07457841957815N160.27942901075068W>



Counties: Dillingham, AK

Endangered Species Act Species

There is a total of 0 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

ATTACHMENTS

**ALASKA STATE HISTORIC
PRESERVATION OFFICE**



P.O. Box 111405
Anchorage, Alaska 99511-1405
Ph. (907) 349-0100, Fax (907) 349-8001

February 5, 2018

Judith E. Bittner, State Historic Preservation Officer
Alaska Office of History and Archaeology
Alaska Department of Natural Resources
550 West 7th Avenue, Suite 1310
Anchorage, AK 99501-3565

Sjm No Historic Properties Affected
Alaska State Historic Preservation Officer
Date: 2/27/18 File No.: 3130-1R DC
2018-00148
Please review: 36 CFR 800.13 / A.S. 41.35.070(d)

Subject: Twin Hills RPSU Project
Request Concurrence of Finding of No Historic Properties Affected

Dear Ms. Bittner:

CRW Engineering Group, LLC in cooperation with the Alaska Village Electric Cooperative (AVEC), is working with the Denali Commission (DC) to upgrade the community of Twin Hills' energy infrastructure. The Twin Hills RPSU project includes installation of a new electrical intertie between Togiak and Twin Hills, and a new overhead electrical distribution system and standby power generator module in Twin Hills, Alaska. The electrical intertie is located within Sections 1 & 12 of T13S R67W and Sections 4, 5 & 6 of T13S, R66W, Seward Meridian. The village electrical distribution upgrades and standby generator module are located within Sections 3, 4, 9 & 10, T13S, R66W, Seward Meridian. Attached are Figures 1-8: Figure 1 includes a vicinity map showing the project area, Figures 2-3 show the Area of Potential Effect (APE) in turquoise, Figure 4 is the Standby Power Site Plan, Figures 5-7 show intertie pile details and Figure 8 is a typical village distribution power pole detail. Pursuant to 36 CFR 800.4(d)(1), implementing regulations of Section 106 of the National Historic Preservation Act, AVEC requests on behalf of the Denali Commission concurrence with the finding that no historic properties would be affected by the proposed project.

The distribution upgrade project replaces Twin Hills old, unreliable, non-code compliant overhead electrical distribution system. It will follow the same general alignment as the existing distribution system, and new power poles will be installed in augured holes. The new intertie between Togiak and Twin Hills will be approximately 4.5 miles long with power poles set on driven H-piles, except at the Togiak River crossing, which will use helical piles. The new standby power generator module will be located on a 40' x 60' gravel pad adjacent to the existing community tank farm.

Intertie construction will occur during the winter, over frozen ground to provide access to the alignment and minimize and mitigate impacts to wetlands. The project will place approximately 5 CY cubic yards of fill into less than 0.1 acres for pile foundations. The village distribution and standby generator module are located in uplands. Approximately 100 CY of fill material will be placed, including the material excavated and replaced during pole installation. Material will come from an existing, developed borrow source approximately 2 miles south of Twin Hills. Construction of the village distribution system and generator module will be performed after breakup when the ground is not frozen.

The Alaska Historic Resources Survey (AHRs) was reviewed on 1/29/18. There are no known archaeological or prehistoric sites within the proposed project location. AVEC requests concurrence that no historic properties would be affected by the proposed project.

Please notify me as soon as possible if you anticipate any concerns with the proposed project. If you have any questions or need additional information, please call me at (907) 349-0100, or fax your comments to (907) 349-8001.

Sincerely,
Gray Stassel Engineering, Inc.

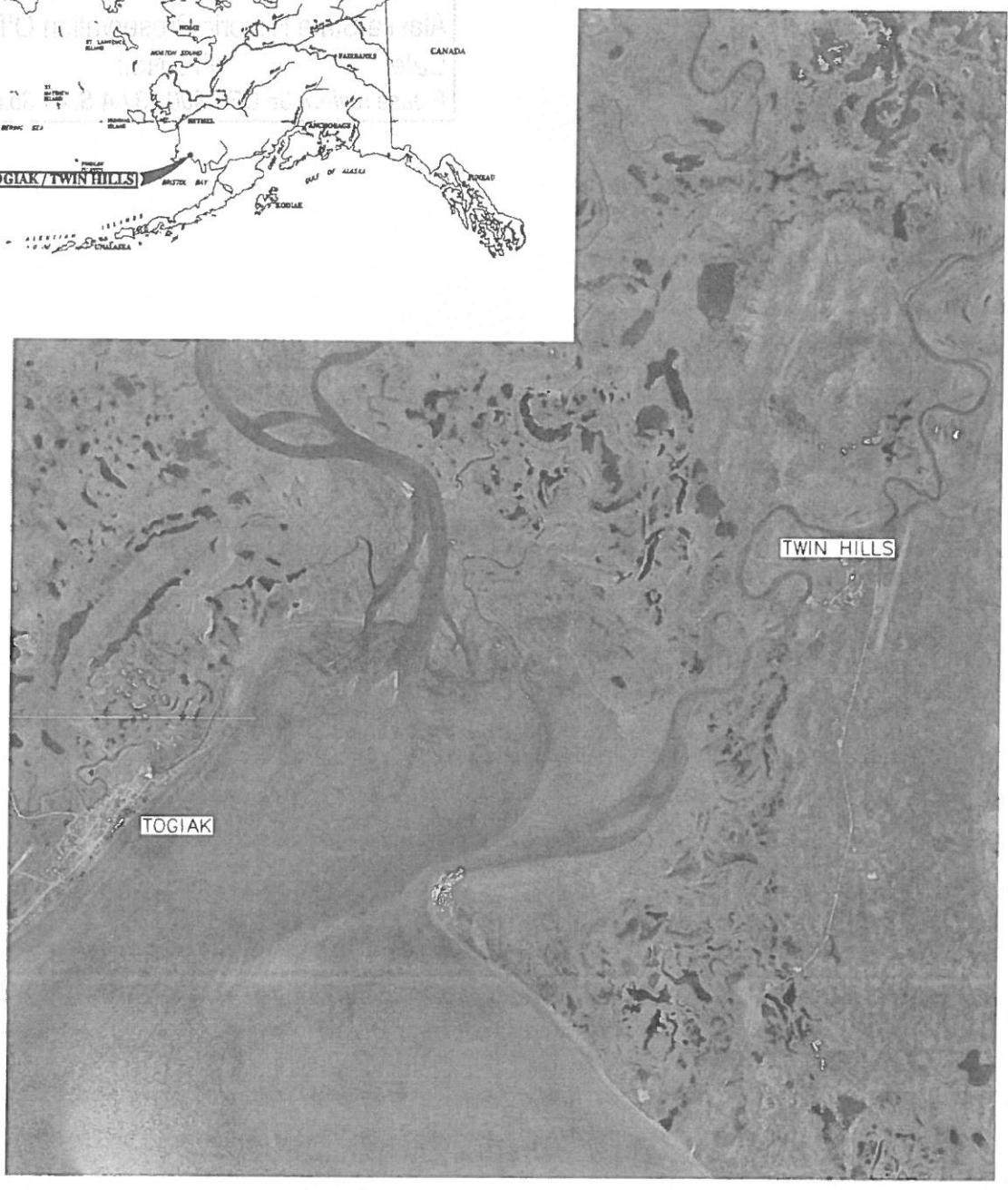
Alison Sterley
Cultural Resource Specialist

cc: Tom Wolf, Denali Commission, twolf@denali.gov
Forrest Button, AVEC, fbutton@avec.org
Karl Hulse, CRW Engineering, khulse@crweng.com

Attachments – as noted

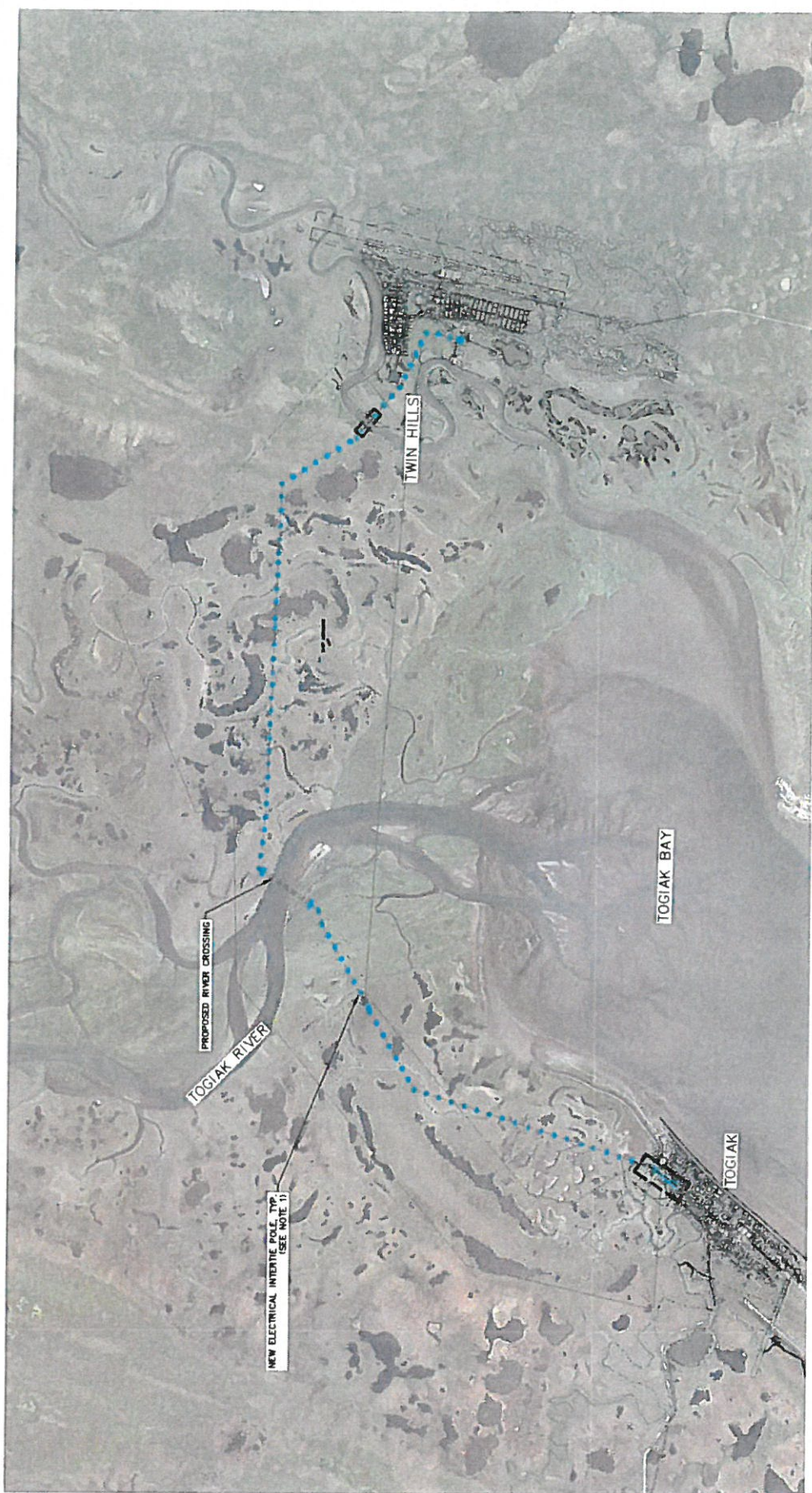
2018-00148

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TWIN HILLS, ALASKA
RURAL POWER SYSTEM UPGRADE
VICINITY MAP

Project No:	30404.09
Drawn By:	JFC
Scale:	N.T.S.
Date:	12/2017
Figure:	1



- LEGEND**
- NEW SINGLE PHASE OVERHEAD PRIMARY
 - NEW 3-PHASE OVERHEAD PRIMARY
 - NEW ELECTRICAL POLE
 - NEW STUB POLE
 - NEW DUY
 - NEW LIGHT

NOTE:

1. INTERTIE POLES WILL BE INSTALLED ON DRIVEN PILES AS SHOWN IN FIGURES 5, 6, AND 7.



TWIN HILLS, ALASKA
RURAL POWER SYSTEM UPGRADE
TOGIK TO TWIN HILLS INTERTIE

PROJECT: 30404.09
STATUS:

DATE: 12 2017
SCALE: GRAPHIC
FIGURE: 3



LEGEND

- NEW SINGLE PHASE OVERHEAD PRIMARY
- NEW 3-PHASE OVERHEAD PRIMARY
- NEW SECONDARY
- NEW ELECTRICAL POLE
- NEW ELECTRICAL POLE
- NEW DAY
- NEW LIGHT

NOTE

1. DISTRIBUTION POLES IN TWIN HILLS WILL BE INSTALLED IN AUGURED HOLES, APPROXIMATELY 24-INCH DIAMETER BY 5-FT DEEP

CRW
CONSULTING & ENGINEERING

PROJECT 30404.09

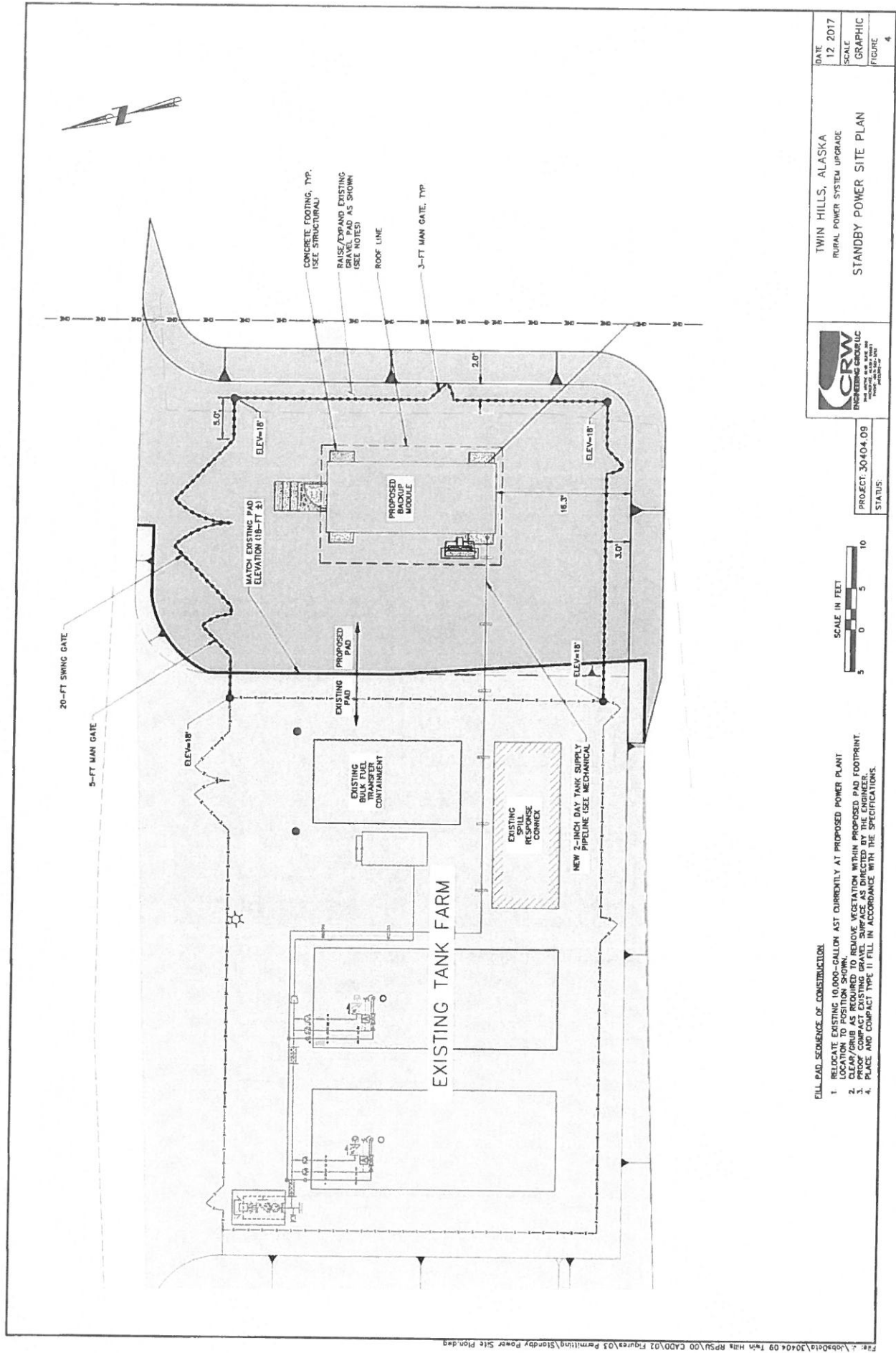
STATUS

SCALE IN FEET

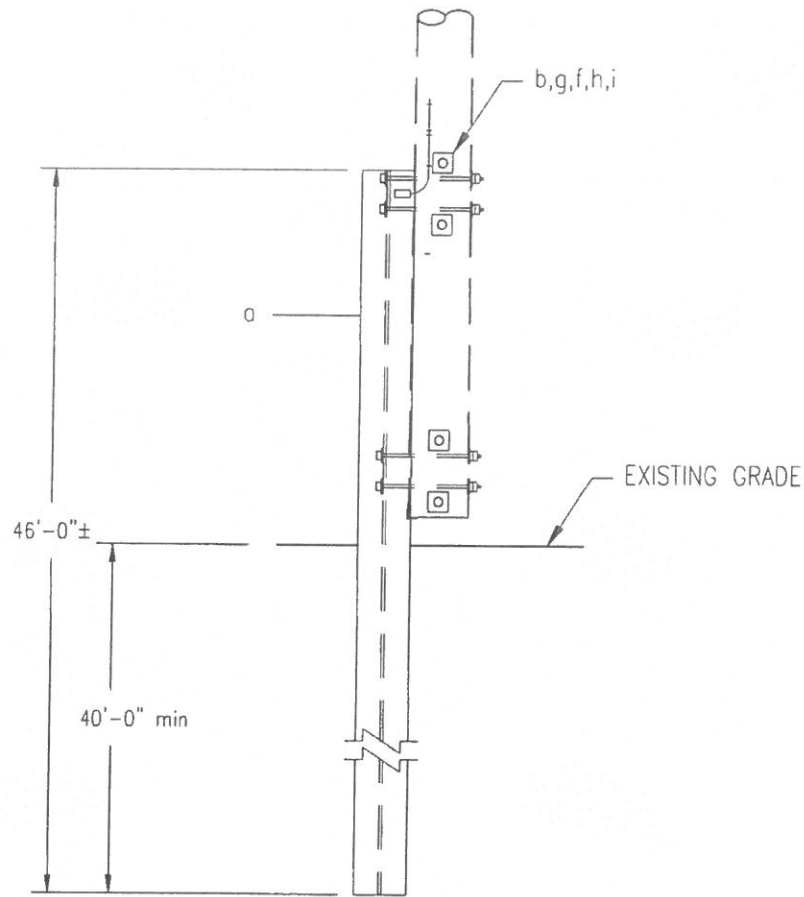
250 0 250 500

TWIN HILLS, ALASKA
RURAL POWER SYSTEM UPGRADE
TWIN HILLS DISTRIBUTION LINE UPGRADES
OVERVIEW

DATE 12/2017
SCALE GRAPHIC
FIGURE 2



FILE NAME: J:\JobsData\30404.09 Twin Hills RPS\00 CADD\02 Figures\03 Permitting\H-PILE & GUY ANCHOR DETAIL.DWG



SIDE VIEW

ITEM	QTY.	MATERIAL
a	1	10x57x46' HP STEEL PILING
b	8	SPRING CLIP WASHER, 3/4"
c	4	BOLT, WASHER, 3/4" x REQ'D LENGTH
d	4	WASHER, SQ. CURVED, 4"x4" W/ 13/16" HOLE
e	4	LOCKNUT, 3/4" MF TYPE
f	4	SPRING CLIP WASHER, 5/8"
g	4	BOLT, MACHINE, 5/8" x REQ'D LENGTH
h	8	WASHER, SQ. CURVED, 4"x4" W/ 11/16" HOLE
i	4	LOCKNUT, 5/8" MF TYPE
j	4	WASHER, SQ., 2-1/4"x2-1/4" W/ 13/16" HOLE



TWIN HILLS, ALASKA
RURAL POWER SYSTEM UPGRADE
NTERTIE POLE FOUNDATION H-PILE DETAIL

Project No 30404.09

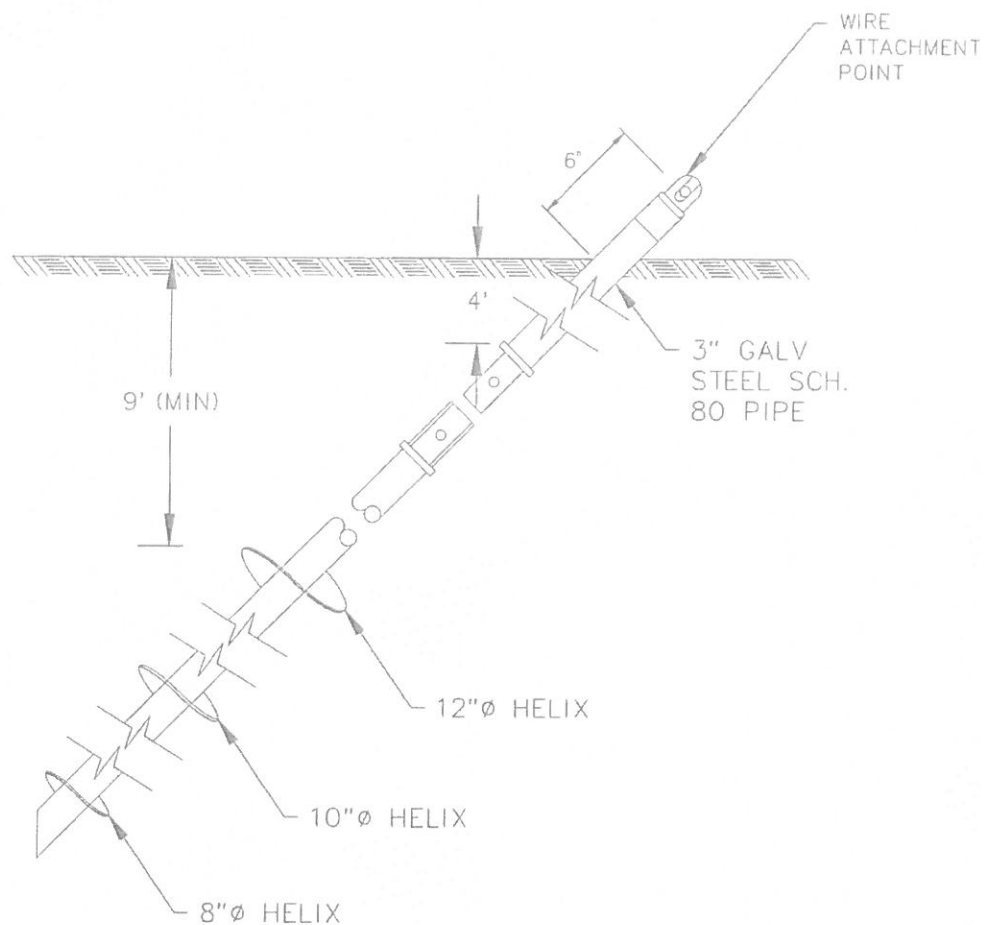
Drawn By JFC

Scale: N.T.S.

Date: 12/2017

Figure: 5

FILE NAME: J:\JobsData\30404.09 Twin Hills RPS\00 CADD\02 Figures\03 Permitting\H-PILE & GUY ANCHOR DETAIL.DWG



NOTES:

1. ADVANCE HELICAL ANCHOR UNTIL THE AVERAGE INSTALLATION TORQUE EXCEEDS THE MINIMUM INSTALLATION TORQUE OF 2,000 FEET-POUNDS OVER THE FINAL THREE FEET OF HELICAL PILE EMBEDMENT OR THE PILES ARE EMBEDDED A MINIMUM OF 9 FEET TO THE UPPER HELIX, WHICHEVER IS DEEPER.



TWIN HILLS, ALASKA
RURAL POWER SYSTEM UPGRADE
GUY WIRE ANCHOR DETAIL

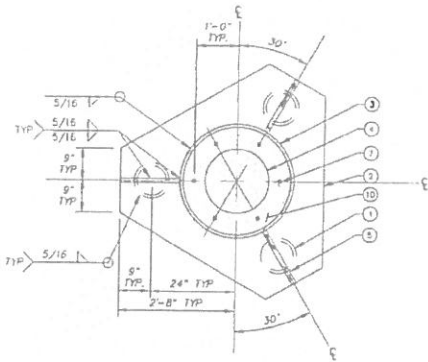
Project No 30404.09

Drawn By JFC

Scale N.T.S.

Date: 12/2017

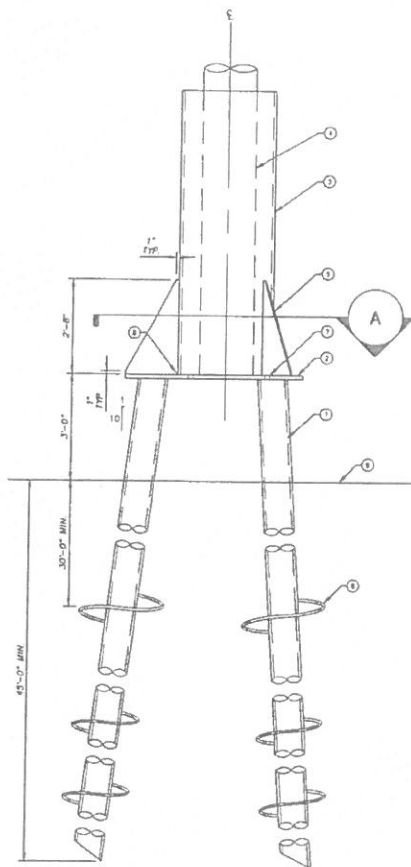
Figure: 6



SECTION A: STEEL PILE CAP PLATE - PLAN VIEW
SCALE: N.T.S.

NOTES:

- ① 10" SCH. 40 HELICAL ANCHORS, TYPICAL OF 3.
- ② 1 1/2" A572, GR 50. STEEL PLATE.
- ③ 32" DIA. STD STEEL PIPE.
- ④ WOOD POLE, PER ELECTRICAL DRAWINGS.
- ⑤ 3/4" A572, GR 50. STEEL GUSSET PLATE, TYPICAL OF 3.
- ⑥ HELIX, PER SPECIFICATIONS.
- ⑦ 1/2" DIA. WEEP HOLE, TYPICAL OF 6.
- ⑧ TYPICAL: 1"x1" COPE.
- ⑨ FINISHED GRADE.
- ⑩ GRAVEL.



PILE/POLE CONNECTION DETAIL
SCALE: N.T.S.



3340 ARCTIC BLVD. SUITE 300
ANCHORAGE, ALASKA 99503
PHONE: (907) 262-3232
FACSIMILE: (907) 262-3232

TWIN HILLS, ALASKA
RURAL POWER SYSTEM UPGRADE
RIVER CROSSING POLE DETAIL

Project No: 30404.09

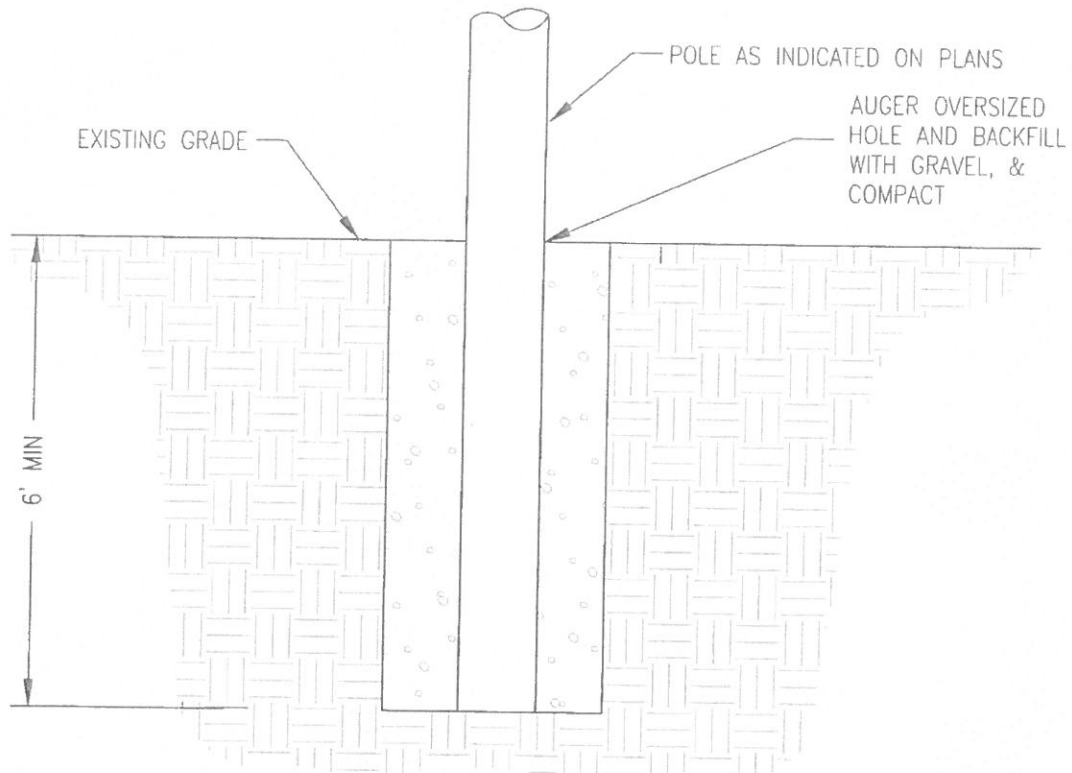
Drawn By: JFC

Scale: N.T.S.

Date: 12/2017

Figure: 7

FILE NAME: J:\JobsData\30404.09 Twin Hills RPS\00 CADD\02 Figures\03 Permitting\HELICAL ANCHOR DETAIL.dwg



TWIN HILLS, ALASKA
RURAL POWER SYSTEM UPGRADE
TYPICAL POWER POLE DETAIL

Project No: 30404.09

Drawn By: JFC

Scale: N.T.S.

Date: 1/2018

Figure: 8

ATTACHMENTS

U.S. ARMY COPRS OF ENGINEERS



DEPARTMENT OF THE ARMY
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
P.O. BOX 6898
JBER, AK 99506-0898

Regulatory Division
POA-2018-00095

William Ilutsik
Twin Hills Village Council
P.O. Box 4061
Twin Hills, AK 99576

Dear Mr. Ilutsik:

This is in response to your March 9, 2018, Department of the Army (DA) permit application (on behalf of Twin Hills Village Council) to construct two aerial crossings of the Togiak River to construct a power line intertie between Togiak and Twin Hills. The project site is located within Section 4, 5, & 6, Township 13 South, Range 67 West; & Sections 1 & 12, Township 13 South, Range 67 West, Seward Meridian; USGS Quad Map GOODNEWS BAY A-4; Latitude 59.08433056° North, Longitude 160.3465139° West; Dillingham Census Area; between Togiak & Twin Hills, Alaska. It has been assigned file number POA-2018-00095, which should be referred to in all future correspondence with this office.

Based on our review of the information you furnished and available to us, we have determined the above project area contains waters of the United States (U.S.), including wetlands, under the Corps of Engineers (Corps) regulatory jurisdiction. At any time you have the right to request and obtain an Approved Jurisdictional Determination (JD), which can be appealed. If it is your intent to request an Approved JD, do not begin work until one is obtained.

DA permit authorization is necessary because your project will involve work in and placement of structures over navigable waters of the U.S. under our regulatory jurisdiction.

Based upon the information and plans you provided, we hereby verify that the work described above, which would be performed in accordance with the enclosed plan (sheets 1-7), dated April 13, 2018, is authorized by Nationwide Permit (NWP) No. 12, Utility Line Activities. NWP No. 12 and its associated Regional and General Conditions can be accessed at our website at:
www.poa.usace.army.mil/Missions/Regulatory/Permits. Regional Conditions **D, E & F**

apply to your project. You must comply with all terms and conditions associated with NWP No. 12, as well as with the special conditions listed below

Further, please note General Condition 30 requires that you submit a signed certification to us once any work and required mitigation are completed. Enclosed is the form for you to complete and return to us.

Unless this NWP is modified or revoked, it expires on March 19, 2022. It is incumbent upon you to remain informed of the changes to the NWPs. Nothing in this letter excuses you from compliance with other Federal, State, or local statutes, ordinances, or regulations.

Please contact me via email at Nicholas.Lucore@usace.army.mil, by mail at the address above, by phone at (907) 753-5783, or toll free from within Alaska at (800) 478-2712, if you have questions or to request paper copies of the regional and/or general conditions. For more information about the Regulatory Program, please visit our website at www.poa.usace.army.mil/Missions/Regulatory.

Sincerely,

Nicholas Lucore
Regulatory Specialist

CF: North Branch

AK DEC
AK DEC
AK-DF&G-DH, Fairbanks (all except Y-K Delta and Bristol Bay)
AK-DF&G-DH, Yukon-Kuskokwim Delta, Bristol Bay
AK-DNR-DMLW, Fairbanks (north of AK Range)
AK-DNR-DMLW, Anchorage (south of AK Range)
AK-DNR-DMLW, Fairbanks (north of AK Range)
AK-DNR-DMLW, Anchorage
AK-DNR-SHPO
EPA
NMFS, Anchorage
USFWS
U.S. Coast Guard

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julie.smith@alaska.gov
Clifford.larson@alaska.gov
oha.revcomp@alaska.gov
AOOARU.R10@epamail.epa.gov
HCD.Anchorage@noaa.gov
FW7_POANotices@fws.gov
D17-PF-DPW-ACOE1@uscg.mil

wilutsik@outlook.com, khulse@crweng.com, NPhelps@crweng.com

Hard Copy:

William Ilutsik
Twin Hills Village Council
P.O. Box 4061
Twin Hills, AK 99576

PREFERRED: osd.dod-siting-clearinghouse@mail.mil

OASD (EI&E)
DoD Siting Clearinghouse
(Attn: Chief, Mitigation Evaluation)
Rm 5C646
3400 Defense Pentagon
Washington DC 20301-3400

ENCLOSURE



**US Army Corps of Engineers
Alaska District**

Permit Number: POA-2018-00095

Name of Permittee: William Ilutsik

Date of Issuance: May 22, 2018

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to Mr. Nicholas Lucore at the following address:

U.S. Army Corps of Engineers
Alaska District
Regulatory Division
Post Office Box 6898
JBER, Alaska 99506-0898

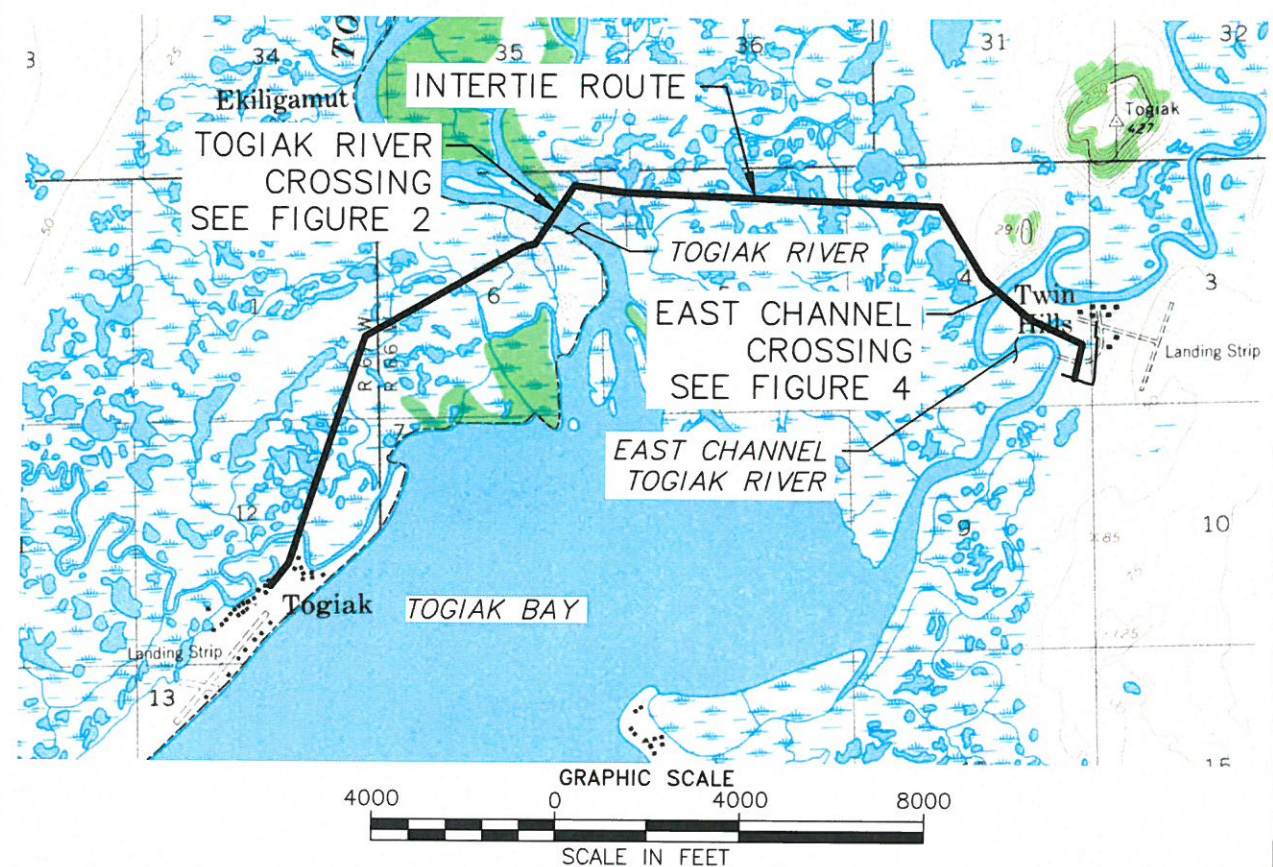
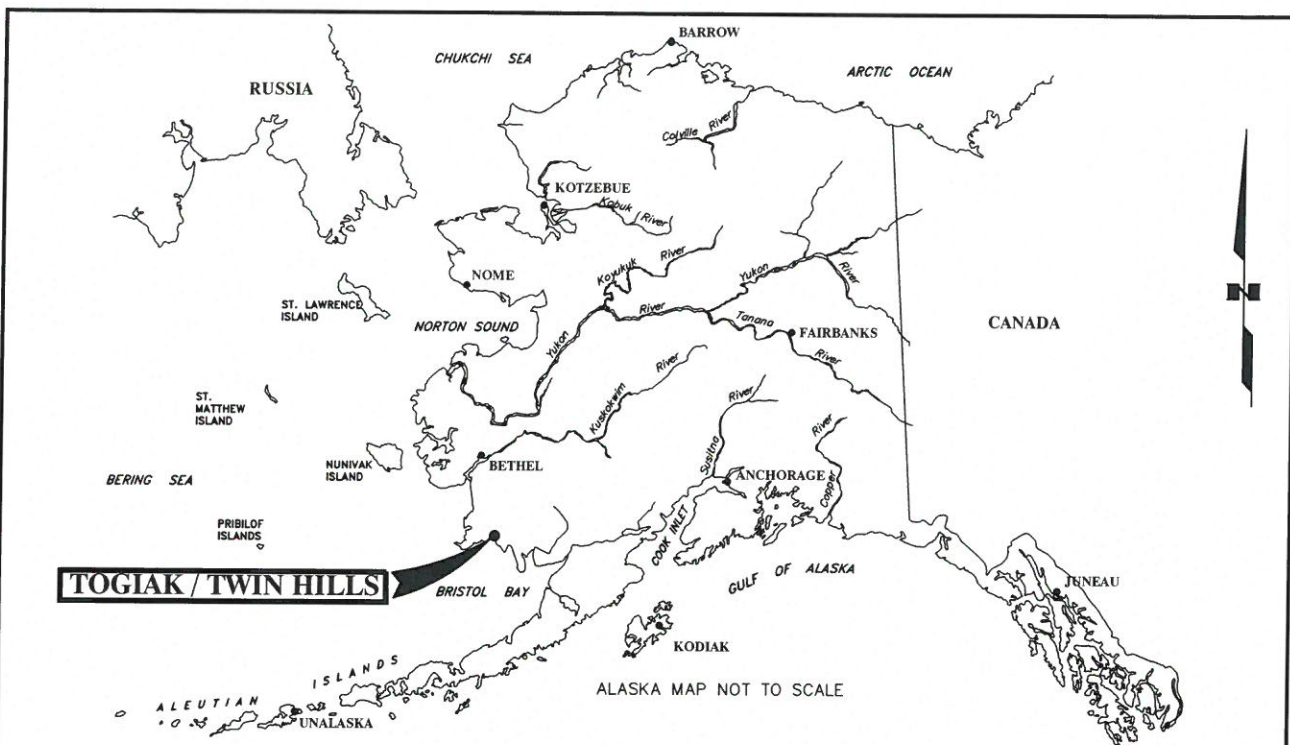
Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

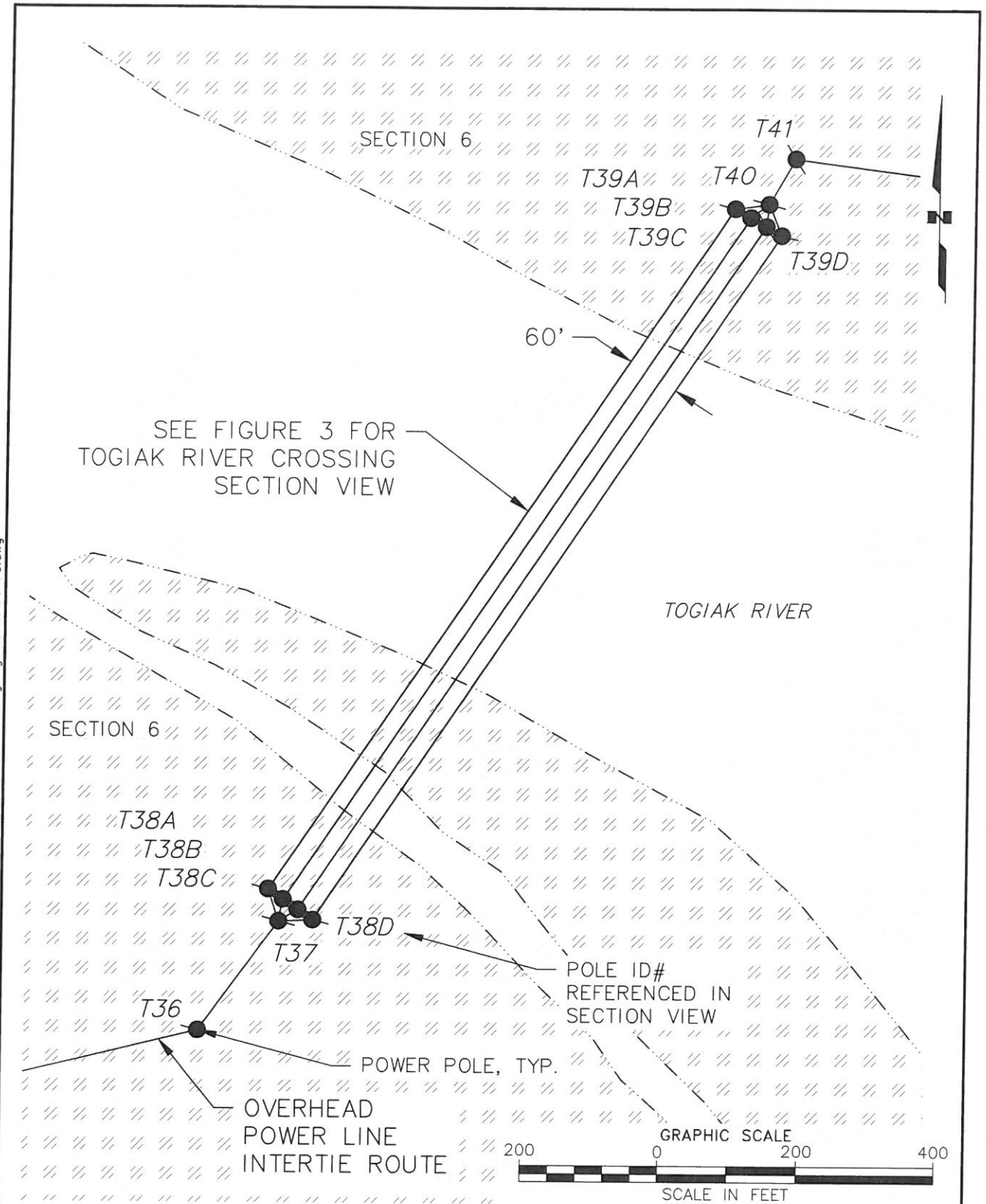
Date

FILE:J:\JobsData\30404.09 Twin Hills RPSU\00 CADD\02 Figures\03 Permitting\USACE\USACE Permitting Figures R1 F1-F3.dwg



<p>APPLICANT: ALASKA VILLAGE ELECTRIC COOPERATIVE 4831 EAGLE STREET ANCHORAGE, AK 55903</p> <p>AGENT: CRW ENGINEERING GROUP, LLC 3940 ARCTIC BLVD., SUITE 300 ANCHORAGE, AK 99503 #AECL882-AK</p>	<p>TOGIAK TO TWIN HILLS POWER LINE INTERTIE</p> <p>VICINITY MAP</p>	<p>LOCATION: TOGIAK, ALASKA SEC 4, 5, & 6 T. 13 S. R. 66 W.; SEC 1, & 12 T. 13 S. R. 67 W.</p> <p>FIGURE 1 OF 7</p> <p>APRIL 2018 SCALE: GRAPHIC</p>
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FILE: J:\JobsData\30404.09 Twin Hills RPSU\00 CADD\02 Figures\03 Permitting\USACE\USACE Permitting Figures R1 F1-F3.dwg



APPLICANT:
ALASKA VILLAGE ELECTRIC COOPERATIVE
4831 EAGLE STREET
ANCHORAGE, AK 55903

AGENT:
CRW ENGINEERING GROUP, LLC
3940 ARCTIC BLVD., SUITE 300
ANCHORAGE, AK 99503
#AECL882-AK

TOGIAK TO TWIN HILLS
POWER LINE INTERTIE

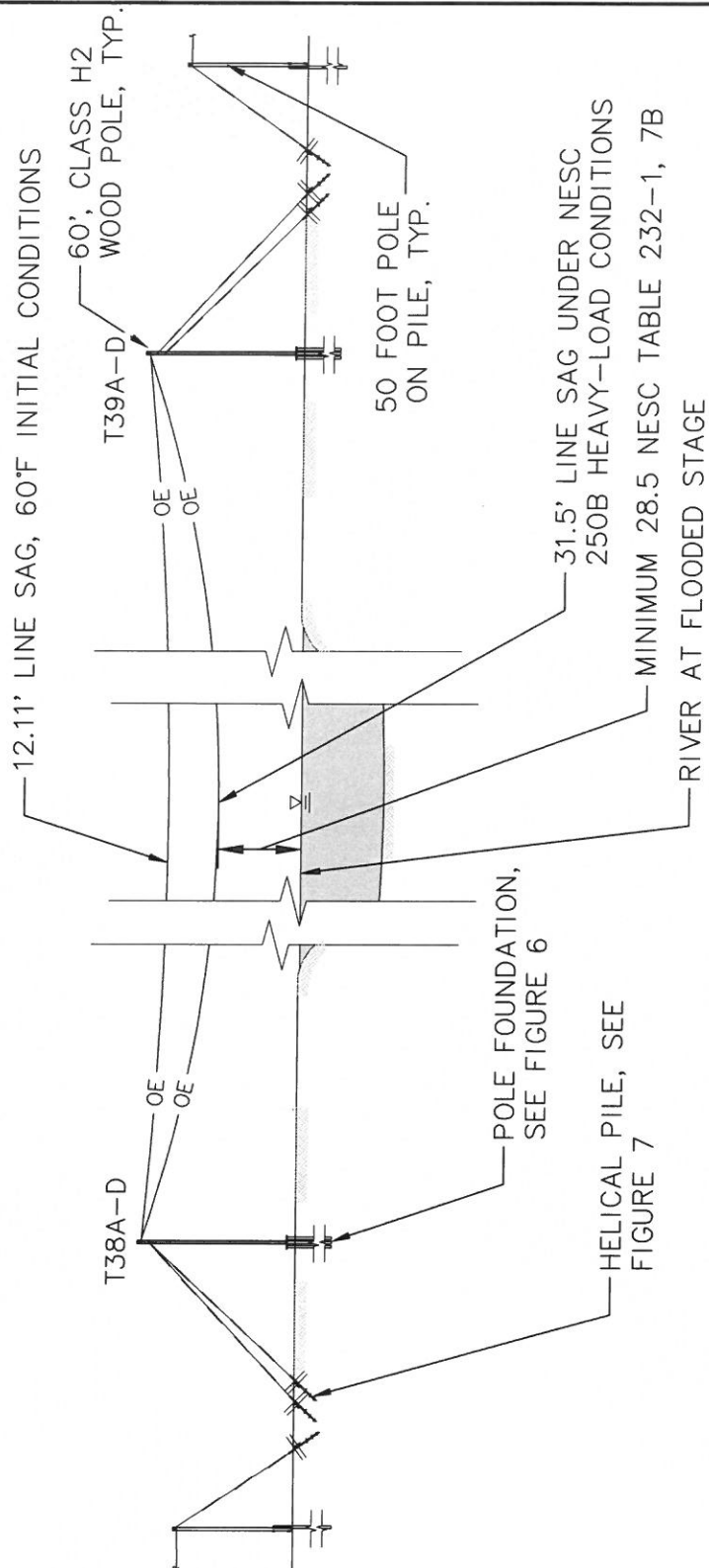
TOGIAK RIVER CROSSING
PLAN VIEW

LOCATION: TOGIAK, ALASKA
SEC 6 T. 13 S. R. 66 W.

FIGURE 2 OF 7

APRIL 2018 SCALE: GRAPHIC

FILE: J:\JobsData\30404.09 Twin Hills RPS\00 CADD\02 Figures\03 Permitting\USACE\USACE Permitting Figures R1 F1-F3.dwg



APPLICANT:
ALASKA VILLAGE ELECTRIC COOPERATIVE
4831 EAGLE STREET
ANCHORAGE, AK 99503

AGENT:
CRW ENGINEERING GROUP, LLC
3940 ARCTIC BLVD., SUITE 300
ANCHORAGE, AK 99503
#AECL882-AK

TOGIAC TO TWIN HILLS
POWER LINE INTERTIE

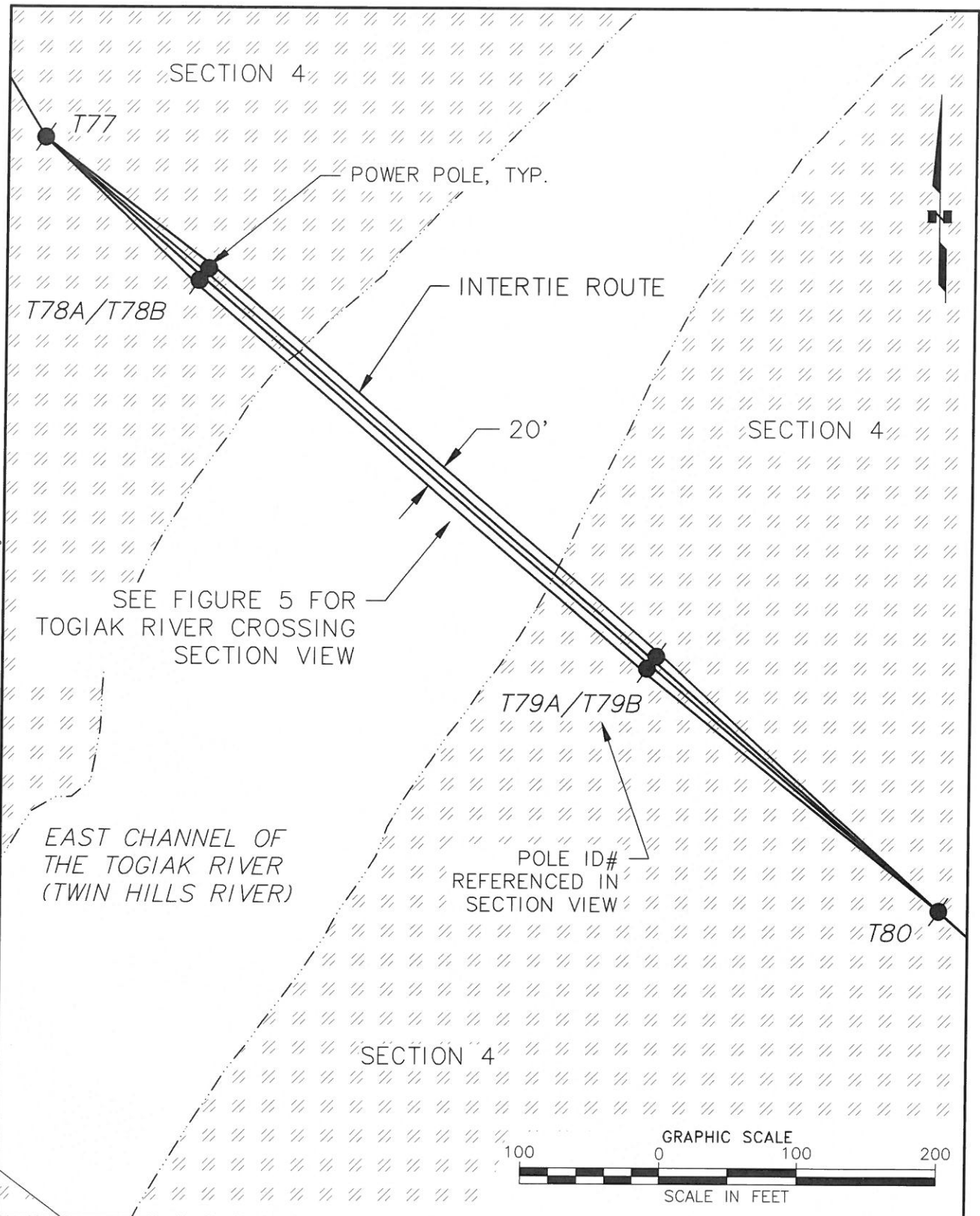
TOGIAC RIVER CROSSING
SECTION VIEW

LOCATION: TOGIAC, ALASKA
SEC 6 T. 13 S. R. 66 W.

FIGURE 3 OF 7

APRIL 2018 SCALE: NTS

FILE: J:\Jobsdata\30404.09 Twin Hills RPSU\00 CADD\02 Figures\03 Permitting\USACE Permitting Figures R1 F4-F5.dwg



APPLICANT:
ALASKA VILLAGE ELECTRIC COOPERATIVE
4831 EAGLE STREET
ANCHORAGE, AK 55903

AGENT:
CRW ENGINEERING GROUP, LLC
3940 ARCTIC BLVD., SUITE 300
ANCHORAGE, AK 99503
#AECL882-AK

TOGIAK TO TWIN HILLS
POWER LINE INTERTIE

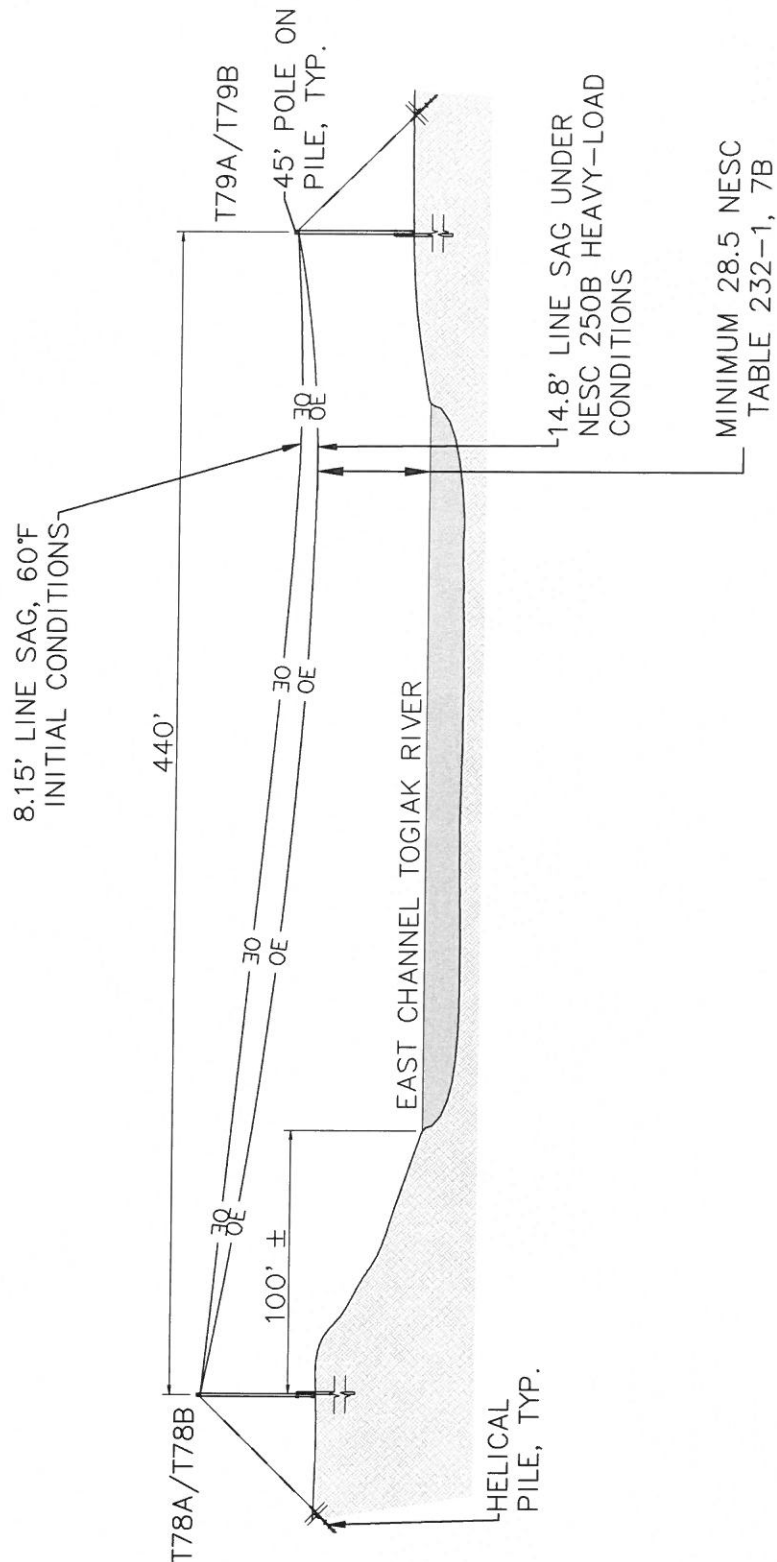
EAST CHANNEL TOGIAK RIVER
CROSSING - PLAN VIEW

LOCATION: TOGIAK, ALASKA
SEC 4 T. 13 S. R. 66 W.

FIGURE 4 OF 7

APRIL 2018 SCALE: GRAPHIC

FILE: J:\Jobsdata\30404.09 Twin Hills RPSU\00 CADD\02 Figures\03 Permitting\USACE\USACE Permitting Figures R1 F4-F5.dwg



APPLICANT:
ALASKA VILLAGE ELECTRIC COOPERATIVE
4831 EAGLE STREET
ANCHORAGE, AK 55903

AGENT:
CRW ENGINEERING GROUP, LLC
3940 ARCTIC BLVD., SUITE 300
ANCHORAGE, AK 99503
#AECL882-AK

TOGIAK TO TWIN HILLS
POWER LINE INTERTIE

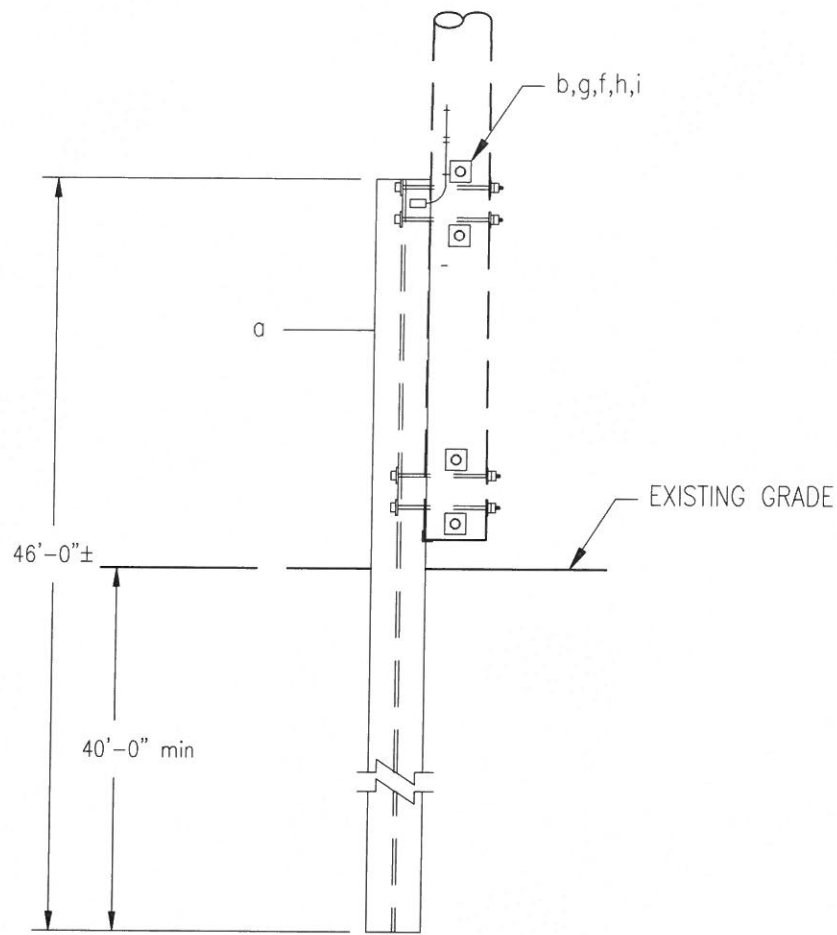
EAST CHANNEL OF TOGIAK RIVER
CROSSING - SECTION VIEW

LOCATION: TOGIAK, ALASKA
SEC 4 T. 13 S. R. 66 W.

FIGURE 5 OF 7

APRIL 2018 SCALE: NTS

FILE: J:\JobsData\30404.09 Twin Hills RPSU\00 CADD\02 Figures\03 Permitting\USACE\H-PILE & GUY ANCHOR DETAIL R1.DWG



SIDE VIEW

ITEM	QTY.	MATERIAL
a	1	10x57x46' HP STEEL PILING
b	8	SPRING CLIP WASHER, 3/4"
c	4	BOLT, WASHER, 3/4" x REQ'D LENGTH
d	4	WASHER, SQ. CURVED, 4"x4" W/ 13/16" HOLE
e	4	LOCKNUT, 3/4" MF TYPE
f	4	SPRING CLIP WASHER, 5/8"
g	4	BOLT, MACHINE, 5/8" x REQ'D LENGTH
h	8	WASHER, SQ. CURVED, 4"x4" W/ 11/16" HOLE
i	4	LOCKNUT, 5/8" MF TYPE
j	4	WASHER, SQ., 2-1/4"x2-1/4" W/ 13/16" HOLE

APPLICANT:
ALASKA VILLAGE ELECTRIC COOPERATIVE
4831 EAGLE STREET
ANCHORAGE, AK 55903

AGENT:
CRW ENGINEERING GROUP, LLC
3940 ARCTIC BLVD., SUITE 300
ANCHORAGE, AK 99503
#AECL882-AK

TOGIK TO TWIN HILLS
POWER LINE INTERTIE

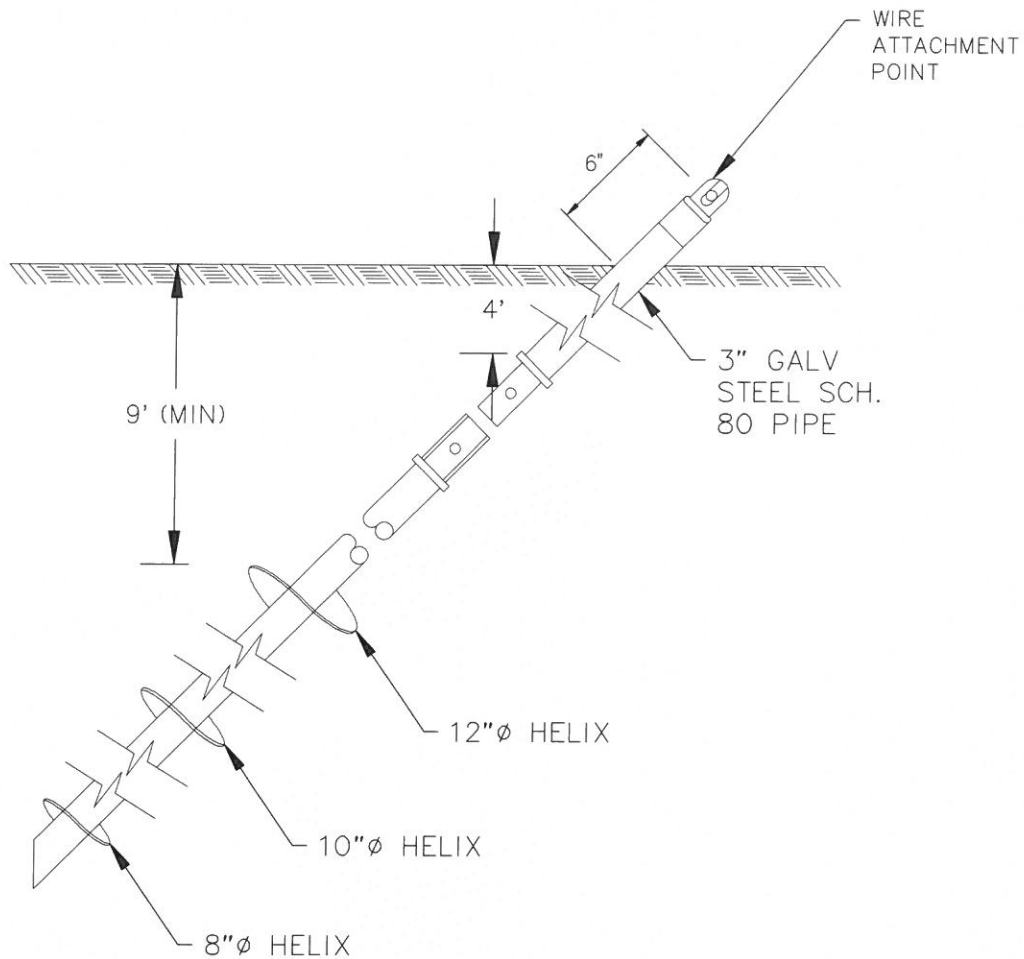
H-PILE DETAIL

LOCATION: TOGIK, ALASKA
SEC 4, 5, & 6 T. 13 S. R. 66 W.;
SEC 1, & 12 T. 13 S. R. 67 W.

FIGURE 6 OF 7

APRIL 2018 SCALE: NTS

FILE:J:\JobsData\30404.09 Twin Hills RPSU\00 CADD\02 Figures\03 Permitting\USACE\H-PILE & GUY ANCHOR DETAIL R1.DWG



NOTES:

1. ADVANCE HELICAL ANCHOR UNTIL THE AVERAGE INSTALLATION TORQUE EXCEEDS THE MINIMUM INSTALLATION TORQUE OF 2,000 FEET-POUNDS OVER THE FINAL THREE FEET OF HELICAL PILE EMBEDMENT OR THE PILES ARE EMBEDDED A MINIMUM OF 9 FEET TO THE UPPER HELIX, WHICHEVER IS DEEPER.

APPLICANT:
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4831 EAGLE STREET
ANCHORAGE, AK 55903

AGENT:
CRW ENGINEERING GROUP, LLC
3940 ARCTIC BLVD., SUITE 300
ANCHORAGE, AK 99503
#AECL882-AK

TOGIK TO TWIN HILLS
POWER LINE INTERTIE

GUY ANCHOR DETAIL

LOCATION: TOGIK, ALASKA
SEC 4, 5, & 6 T. 13 S. R. 66 W.;
SEC 1, & 12 T. 13 S. R. 67 W.

FIGURE 7 OF 7

ARPIL 2018 SCALE: NTS

ATTACHMENTS

FEDERAL EMERGENCY MANAGEMENT AGENCY

National Flood Hazard Layer FIRMette



59°3'39.63"N

160°23'12.41"W



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS



Without Base Flood Elevation (BFE)
Zone A, V, A99
With BFE or Depth
Regulatory Floodway Zone AE, AD, AH, VE, AR

OTHER AREAS OF FLOOD HAZARD



0.2% Annual Chance Flood Hazard. Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
Future Conditions 1% Annual Chance Flood Hazard Zone X
Area with Reduced Flood Risk due to Levee. See Notes. Zone X
Area with Flood Risk due to Levee Zone D

OTHER AREAS



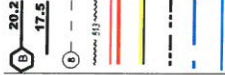
Area of Minimal Flood Hazard Zone X
Effective LOMRs
Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES



Channel, Culvert, or Storm Sewer
Levee, Dike, or Floodwall

OTHER FEATURES



Cross Sections with 1% Annual Chance Water Surface Elevation
Coastal Transect
Base Flood Elevation Line (BFE)
Limit of Study
Jurisdiction Boundary
Coastal Transect Baseline
Profile Baseline
Hydrographic Feature

MAP PANELS



Digital Data Available
No Digital Data Available
Unmapped

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/23/2018 at 6:26:33 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

160°22'34.95"W

59°3'21.13"N

ATTACHMENTS

**ENVIRONEMENTAL
PROTECTION AGENCY**

Designated Sole Source Aquifers in EPA Region 10 Idaho, Oregon, Washington (None in Alaska)

